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(54) Title: ANTIVIRAL COMPOSITION COMPRISING A SULPHATED GLUCOSE POLYMER AND A BACTERIOSTATIC AGENT

(57) Abstract: There is described a pharmaceutical composition comprising a glucose polymer or a mixture of glucose polymers and, optionally, salts thereof and a non-sensitising bacteriostatic agent, such as sorbic acid. There is also described a method of treatment, alleviation or prevention of HIV- 1 or a related virus or other sexually transmitted diseases by the administration of a such a composition.

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61K31/715 A61K47/12 A61P31/12 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 7 **A61K** Documentation searched other than minimum documentation to the extent that such documents are included. In the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, BIOSIS, EMBASE C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Χ EP 0 394 333 B (BUKH MEDITEC) 1-6, 25-39, 31 October 1990 (1990-10-31) 55,56,58 page 3, line 14 - line 23 example 6 the whole document Α 7-24 40-54. 57, 59-102 Χ Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) " document of particular relevance; the claimed, invention occument of particular relevance; the claimed, invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-ments, such combination being obvious to a person skilled in the art. "O" document referring to an oral disclosure, use, exhibition or document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report J 4. OZ 2004 9 June 2004 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Fax: (+31-70) 340-3016 Collura, A

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PCT/GB2004/000239

Category °	Dation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	
	mile appropriate, or the relevant passages	Relevant to daim No.
X	STAFFORD M K ET AL: "A PLACEBO-CONTROLLED, DOUBLE-BLIND PROSPECTIVE STUDY IN HEALTHY FEMALE VOLUNTEERS OF DEXTRIN SULPHATE GEL" JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES AND HUMAN RETROVIROLOGY, LIPPINCOT-RAVEN, XX, vol. 14, no. 3, 1 March 1997 (1997-03-01),	1-8,12, 13, 67-102
,	pages 213-218, XP001095808 ISSN: 1077-9450 cited in the application the whole document	
		1-102
/	WO 92/04904 A (ML LAB PLC) 2 April 1992 (1992-04-02) cited in the application the whole document	1-102
	EP 0 240 098 A (UENO SEIYAKU 0YO KENKYUJO KK) 7 October 1987 (1987-10-07) cited in the application formulations 1-3 page 3, line 1 - line 20 example 4	1-102
	MCCORMACK S ET AL: "MICROBICIDES IN HIV PREVENTION" BMJ. BRITISH MEDICAL JOOURNAL, LONDON, GB, vol. 322, no. 7283, 17 February 2001 (2001-02-17), pages 410-413, XP001145843 ISSN: 0959-8146 cited in the application the whole document	1-102
	CHIRIFE J ET AL: "Effect of potassium sorbate and pH on the survival of Staphylococcus aureus in saturated sugar solutions." REVISTA ARGENTINA DE MICROBIOLOGIA. 1993 APR-JUN, vol. 25, no. 2, April 1993 (1993-04), pages 80-87, XP009031004	1-102
	ISSN: 0325-7541 abstract the whole document	
	US 2002/173485 A1 (BRAGUTI GIANLUCA ET AL) 21 November 2002 (2002-11-21) page 1, left-hand column, paragraph 2 - paragraph 6 example 1 claims 7,25	1-102

International application No. PCT/GB2004/000239

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. X Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 67-82 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

information on patent family members

Internation No PCT/GB2004/000239

	T		PCI/GB2	004/000239
Patent document cited in search report	Publication date		Patent family member(s)	Publication date
EP 0394333 B	31-10-1990	DEEKPPRTTUUUEEDKKWOPPKPPSSUUAA	3853365 D1 3853365 T2 151590 A ,B, 0394333 A1 7039347 B 9303117 B1 119778 T 197546 T 2914589 A 631529 B2 2914689 A 3856442 D1 3856442 T2 5792 A 20394 A 151690 A 8905645 A1 8905646 A1 0420849 A1 0640346 A1 56396 A 4500797 T 4500798 T 5916880 A 5908836 A 664419 B2 3396093 A	20-04-1995 27-07-1995 14-08-1990 31-10-1990 01-05-1995 19-04-1993 15-04-1995 15-12-2000 19-07-1989 03-12-1992 19-07-1989 21-12-2000 10-05-2001 17-01-1992 18-02-1994 15-08-1990 29-06-1989 29-06-1989 10-04-1991 01-03-1995 03-04-1996 13-02-1992 13-02-1992 29-06-1999 01-06-1999 01-06-1999 16-11-1995 06-05-1993
WO 9204904 A	02-04-1992	AT AU CA DE DE DK EP ES WO IE JP JP NZ PT US ZA	165005 T 649731 B2 8614591 A 2092094 A1 69129272 D1 69129272 T2 550532 T3 0550532 A1 2113888 T3 9204904 A1 913340 A1 3281373 B2 6503305 T 239908 A 99057 A 5439892 A 6015799 A 9107597 A	15-05-1998 02-06-1994 15-04-1992 26-03-1992 20-05-1998 12-11-1998 08-03-1999 14-07-1993 16-05-1998 02-04-1992 25-02-1992 13-05-2002 14-04-1994 26-03-1993 31-08-1995 18-01-2000 27-05-1992
EP 0240098 A	07-10-1987	AU CA EP JP JP JP OA PH US	597635 B2 7107487 A 1277239 C 0240098 A2 1648661 C 2007577 B 63045223 A 1151521 A 8581 A 25964 A 4840941 A	07-06-1990 08-10-1987 04-12-1990 07-10-1987 13-03-1992 19-02-1990 26-02-1988 14-06-1989 30-09-1988 13-01-1992 20-06-1989

Information on patent family members

į	Internation No
	PCT/GB2004/000239

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 0240098	A		ZA ZM	8702359 3087		27-04-1988 28-07-1989
US 2002173485	A1	21-11-2002	IT AU BR CA CN WO EP HR JP NO NZ US	MI20001732 1211302 0112962 2424346 1474700 0209637 1313489 20030046 2004505028 20030411 523832 2002183278	A A A1 T A2 A2 A2 A2 T A	28-01-2002 13-02-2002 24-06-2003 07-02-2002 11-02-2004 07-02-2002 28-05-2003 30-04-2004 19-02-2004 27-01-2003 26-09-2003 05-12-2002